arrived at that the basilar site was the more probable one. The lesion is, no doubt, of tubercular origin. A chronic nuclear condition must be excluded, on account of the rapid progress of the symptoms, and because they have remained strictly unilateral. Dr. Jacoby's case he considered a very interesting one, although he felt rather inclined to doubt the diagnosis, because of the rapid progress of the symptoms. They seemed to indicate the presence of some active lesion, either specific or tubercular.

MODIFICATIONS OF RESPIRATION IN THE INSANE.

DR. THEO. H. KELLOGG read an interesting paper on this subject. He gave a systematic description of the various forms of respiratory changes found in the insane. To facilitate the study of these modifications, he grouped them as follows: A. Modifications of respiration as regards frequency, depth, rhythm and sound. B. (1) Spasmodic expiratory modifications, such as occur in laughter, crying, sneezing, coughing and snoring; (2) Spasmodic inspiratory modications, as in singultus, chasmus, and laryngeal crisis. C. Dyspnosic modifications.

DR. WILLIAM M. LESZYNSKY presented a new form of electrode to be employed for diagnostic purposes.

REPORT OF A CASE OF SARCOMA OF THE CERVICAL CORD: AUTOPSY.

DR. C. A. HERTER read the history of this case and presented some photographs and microscopical specimens to illustrate it. The patient was a male, aged twenty-nine, single, a merchant by occupation. He was in good health until the beginning of the present illness, barring occasional attacks of chills and fever, and repeated and prolonged colds which ended in cough lasting several weeks. The patient has never used alcohol and his habits have always been in every respect exemplary. The family history is negative. In May, 1891, the patient noticed a loss of sensation, beginning as numbness, in the ulnar side of the little finger of the right hand. This sensory loss soon extended to the entire little finger and thence to the ring finger and the ulnar side of the middle finger. At the same time there was an upward extension of anaesthesia along the hand. Three months from the onset the anaesthesia had passed up the ulnar side of the forearm and arm and had reached outward over the hand as far as the thumb. The patient also began to have pain on the ulnar side of the right forearm and hand; slight and occasional at first, later very severe and of increased duration. This was followed by loss of power, first in the flexors of the fingers; then in those of the forearm. About five months after the first symptoms were noted, there developed atrophy of the first dorsal interosseus. This wasting soon extended to the muscles of the thumb and hypothenar eminence and to the flexors of the forearm. About the eighth month the pain abated very much. During the period of severest pain the entire right arm became œdematous. An electrical examination made in June, 1892, showed a loss of faradic irritability in the right arm and in all the extensors and flexors of the wrist and interossei. Tactile and pain sense were entirely lost along the ulnar border of the arm to the axilla and were greatly impaired along the radial border as high as the shoulder. Temperature sense (which was only roughly tested) appeared to be quite lost in the arm. There was almost an entire loss of muscle sense; the patient had no sense whatever of the position of the fingers, hand and arm. The surface of the right arm was much colder than that of the left. It was pale in color. In the left hand and arm, power and sensation were apparently normal. Both legs were a little weak. Equilibrium was maintained without any difficulty. The knee-jerks were increased, the exaggeration being more pronounced on the right side. The power of the sphincters was unimpaired. There was no vertebral deformity and no tenderness on pressure over any of the cervical or upper dorsal spines. Sight was unimpaired. The pupils reacted normally to light and during accommodation. The right palpebral fissure was distinctly smaller than the left, and the right lid drooped a little. An examination of the chest showed dullness on percussion over the upper part of the right side. Temperature 101. Pulse 100. Respiration about 30 per minute. In the course of two weeks after this examination the right leg became much weaker than before, and pain and numbness extended gradually down the entire left arm. Loss of power was also detected in the left leg. There was temporary retention of urine. In July, 1892, a tense swelling was observed over the outer end of the right clavicle and extended down into the axilla over the front of the shoulder. In the course of two weeks this tumor grew to the size of a child's head, became very tense and was covered by greatly distended veins. The patient grew rapidly worse. Incontinence of urine and feces set in and the breathing became labored owing to paralysis of the thoracic muscles. There was total loss of sensibility extending as high as the crest of the ileum upon both sides, with impairment of sensibility bilaterally as high as the third rib. Large bed-sores appeared, and on September 12, 1892, sixteen months after the beginning of symptoms, the patient died from exhaustion and respiratory failure.

A partial autopsy was made and a mass removed from the clavicle and another from the upper and posterior part of the thoracic wall. A number of tumors occupied the posterior and inner aspects of the right upper chest, displacing the lung. Some of these masses appeared to grow from the clavicle, others from the vertabræ, but their relations could not be distinctly made out. The specimen obtained from the spinal cord was five inches long, and extended from the eighth cervical to the seventh dorsal segments, both inclusive. Sections were made from the eighth cervical, and first, second and third dorsal segments. The tumor involved at this level nearly the entire right half of the cord and encroaches anteriorly upon the left anterior column of the cord. Posteriorly, it did not pass quite to the posterior horn. The ganglion cells in the region of the tumor have undergone partial or entire destruction, or in some instances have been apparently replaced by small groups of spindle-shaped connective tissue cells. In structure, the tumor is an exceedingly vascular spindle-celled sarcoma. Sections made from the mass obtained from the clavicle and thoracic wall showed them to be fibro-sarcomata.

Regarding the diagnosis of the case, Dr. Herter said that while the anatomical diagnosis presented no difficulties, the pathological diagnosis was made with some hesitation. The presence of signs of consolidation over the lung, muco-parulent expectoration, hectic temperature, rather rapid emaciation and night sweats, all suggested a tubercular process, and the diagnosis of a secondary tubercular tumor of the cord was thought to be justified. The alternative diagnosis was sarcoma, but this appeared improbable. An examination of the sputum was not made. Twenty-six cases of sarcoma of the spinal cord collected by Dr. Herter, and compared with cases of massive tubercle of the cord, brought out a number of facts, some of them of practical interest. They are: 1st. Sarcoma of the spinal cord occurs with about equal frequency in the two sexes; of the twenty-six cases, fourteen were in females, twelve in males. 2d. Sarcoma of the spinal cord is essentially a disease of adult life; of twenty-one cases, only two occurred before the twentieth year; seventeen occurred between the ages of twenty and fifty years. Massive tubercle, on the contrary, is a disease of adolescent and early adult life: fifteen out of twenty-four occurred between the fifteenth and thirty-fifth year and five before the fifth year. 3d. Etiological factors in the production of sarcoma of the spinal cord are practically unknown. In one case only (a fall on the ice) does it appear to have exerted any influence, and even here the influence may be questioned. 4th. In three cases of sarcoma, the first symptom appeared during pregnancy. 5th. Pain appears to be the earliest and most prominent symptom in four-fifths of the cases. Speaking generally, the early symptoms of sarcoma of the cord are mainly of an irritative and not of a destructive nature. 6th. In sarcoma, the course of the disease is in general, much slower than in tubercle. In all of the above cases the diagnosis was confirmed by autopsy. Glioma were excluded.

Dr. B. Sachs said he was much interested in Dr. Herter's attempts at differential diagnosis between sarcoma and tubercle of the cord. The rapid progress and greater destructiveness of the latter disease is probably the most important symptom we have. In a case that came under his observation eight years ago, he diagnosed probable sarcoma and found tubercle, and in that case the solitary tubercle of the cord was positively the original deposit of the disease. Tumors of the cord, Dr. Sachs said, are of extreme rarity.

Dr. Mary Putnam Jacobi referred to

A CASE OF SARCOMA OF THE CORD IN A CHILD,

Reported by Dr. Gee (St. Bartholomew's Hospital Reports), in which the diagnosis was confirmed by autopsy. In a case reported by her in last autumn, the symptom very closely resembled those in Dr. Gee's case. There was a predominence of the irritative over the destructive symptoms and unilateral paralytic symptoms.